



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/351,102	07/08/1999	RICHARD L. BONKOWSKI	13676.142	9254

22913 7590 03/15/2002

WORKMAN NYDEGGER & SEELEY  
1000 EAGLE GATE TOWER  
60 EAST SOUTH TEMPLE  
SALT LAKE CITY, UT 84111

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT	PAPER NUMBER
----------	--------------

1772

17

DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/351,102

Applicant(s)

BONKOWSKI ET AL.

Examiner

Alicia Chevalier

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 and 42-56 is/are pending in the application.
- 4a) Of the above claim(s) 7,14-17,23-28 and 42-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, and 18-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13 + 16.                      6) ☐ Other:

**RESPONSE TO AMENDMENT**

***WITHDRAWN REJECTIONS***

1. The 35 U.S.C. §102, §102/103, and §103 rejections of record in paper #12, pages 2-6, paragraphs #3-9, have been withdrawn due to Applicant's amendment in paper #15.

***NEW REJECTIONS***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

3. Claims 1-4, 53, 54, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Lu (5,254,390).

Lu discloses a novel plano-convex base sheet and retroreflective articles used as transparent overlays to protect documents from tampering. The overlays can be imaged with information to enhance the authenticity of the document, e.g., a design or the bearer's photograph, and also provide high tamper-resistance. Some of the information can be in the form of so-called "flip-flop" images that are viewable only across a narrow range of angles and change color across that range of angles. Such images can be viewable in ambient light, thus affording a readily apparent verification of the authenticity of the document. See column 2, lines 8-23.

---

Art Unit: 1772

The article comprises a transparent base sheet (substrate) having a first and second broad faces, array of substantially hemi-spheroidal microlenses (optical interference pattern/diffraction grating) on the first broad face, and substantially continuous specularly reflective layer (color shifting optical coating) on the second face. See col. 3, lines 6-16 and figure 1. The base sheet is a flexible film of polyester, polyvinyl chloride, and polymethyl methacrylate (col. 6, lines 17-20).

The resultant variations in thickness of the transparent reflective layer produce a colored "flip-flop" image that can be seen in ambient light through the polymeric layer, which image is bright when viewed retroreflectively. See col. 5, lines 4-8.

The microlenses are closely packed within the array to enhance the degree of focusing, and in retroreflective embodiments, increase the retroreflective brightness. See column 3, lines 44-47.

***Claim Rejections - 35 USC § 102/103***

4. Claims 1, 4, 8 and 53-56 are rejected under 35 U.S.C. 102(e) as being anticipated by Tahara et al. (5,856,048).

Tahara discloses a information recorded media comprising a release layer, a hologram layer, a blocking layer, an absorbing ink layer, a reflecting layer, and adhesive, which produces (figure 14).

Although Tahada does not explicitly teach the limitations observable discrete color shift, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. hologram, substrate, and optical

Art Unit: 1772

coating). The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed observable discrete color shift would obviously have been provided by the process disclosed by Tahada. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

***Claim Rejections - 35 USC § 103***

5. Claims 1-6, 8-13, 18-22, 53, 54, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (5,549,953) in view of Lu (5,254,390).

Li discloses a new thin film structure for optical media to have a built-in security feature (col. 1, lines 61-63). The new thin film structure combines the performance of an ordinary thin film security device with that of an ordinary optical medium. The color of the structure changes with viewing angle. See column 5, lines 11-14. The thin film structure comprising a substrate, a recording layer, a spacing layer, and a reflecting layer (figure 1b). The substrate comprises glass, plastic or metal (col. 5, line 28). The recording layer is made of a light absorbing material such as chromium, nickel, titanium, cobalt, tungsten, niobium, molybdenum, and ferric oxide (col. 5, lines 48-50). The spacer layer is made of a transparent dielectric material such as aluminum oxide, silicon dioxide, and magnesium fluoride (col. 5, lines 43-45). The reflecting layer is made of material such as aluminum, chromium, cobalt, copper, gold, nickel, niobium, platinum, and silver (col. 5, lines 32- 38).

Li fails to teach the substrate having an optical interference on the side opposite the optical coatings and the particular plastic used in the substrate.

Art Unit: 1772

Lu discloses a novel plano-convex base sheet and retroreflective articles used as transparent overlays to protect documents from tampering. The overlays can be imaged with information to enhance the authenticity of the document, e.g., a design or the bearer's photograph, and also provide high tamper-resistance. Some of the information can be in the form of so-called "flip-flop" images that are viewable only across a narrow range of angles and change color across that range of angles. Such images can be viewable in ambient light, thus affording a readily apparent verification of the authenticity of the document. See column 2, lines 8-23.

The article comprises a transparent base sheet (substrate) having a first and second broad faces, array of substantially hemi-spheroidal microlenses (optical interference pattern/diffraction grating) on the first broad face, and substantially continuous specularly reflective layer (color shifting optical coating) on the second face. See col. 3, lines 6-16 and figure 1. The base sheet is a flexible film of polyester, polyvinyl chloride, and polymethyl methacrylate (col. 6, lines 17-20).

The resultant variations in thickness of the transparent reflective layer produce a colored "flip-flop" image that can be seen in ambient light through the polymeric layer, which image is bright when viewed retroreflectively. See col. 5, lines 4-8.

The microlenses are closely packed within the array to enhance the degree of focusing, and in retroreflective embodiments, increase the retroreflective brightness. See column 3, lines 44-47.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add microlenses to the substrate of Li as taught by Lu because the microlenses

Art Unit: 1772

would enhance the degree of focusing and increase brightness of the color shifting interference coating.

Li discloses the claims invention except for substrate being made of one of the claimed plastic material in claim 3. It would have been obvious to one having ordinary skill in the art at the time the invention was made to the substrate from one of the claimed plastic materials, since it have been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use and in view of the disclosure of Lu. *In re Leshin*, 125 USPQ 416. One of ordinary skill in the art would be motivated to use one of the claimed materials depending on the different optical characteristics desired, i.e. color shift, for the intended use of the optical article of Li.

Although Li does not explicitly teach the limitation the dielectric layer has an index of refraction of about 1.65 or less, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. aluminum oxide, silicon dioxide, and magnesium fluoride). The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

Li and Lu disclose the claimed invention except for a release layer on the substrate. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to add a release layer to the substrate since it is known in the are to add release layers to optical substrate to protect them before use.

The exact thickness of absorber layer, dielectric layer, and reflector layer are deemed to be a cause effective variable with regard to color shifting properties of the interference coating.

It would have been obvious to one having ordinary skill in the art to have determined the

Art Unit: 1772

optimum value of a cause effective variable such as the thickness of absorber layer, dielectric layer, and reflector layer through routine experimentation in the absence of a showing of criticality in the claimed combined thickness. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). One of ordinary skill in the art would be motivated to optimize the thickness of each layer depending on the different optical characteristics desired, i.e. color shift, for the intended use of the optical article.

### ***ANSWERS TO APPLICANT'S ARGUMENTS***

6. Applicant's arguments filed in paper #15 regarding the 35 U.S.C. §102, §102/103, and §103 rejections of record have been considered but are moot since the rejections have been withdrawn.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



Art Unit: 1772

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


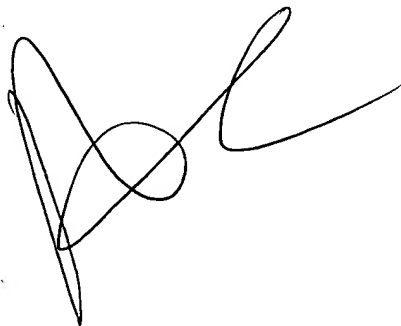
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays

If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Blaine Copenheaver can be reached by dialing (703) 308-1261. The fax phone number for the organization official non-final papers is (703) 872-9310. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

3/6/02



BLAINE COPENHEAVER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY-CENTER 1700